

#### CAPSULE SUMMARY

Bridge No. 10071

MIHP # F-4-104

Myersville vicinity

Frederick County, Maryland

1927

Public

Bridge No. 10071 is a two-lane, two-span, concrete T-beam bridge that carries Wolfsville Road (MD-17) over Middle Creek. The bridge is located at the intersection of Wolfsville Road and Bittle Road. The State Roads Commission built the bridge in 1927 under contract #F 73. The bridge has one span measuring 34' and the other measuring 38'. The roadway width is 24' (Lanier and Linhart 1996). The structure features concrete abutments, flared wingwalls, and piers. The superstructure features five poured-in-place concrete beams and a concrete deck overlaid with asphalt. The structure features incised concrete parapets. One quarter of the upstream parapet has been replaced and the one upstream wingwall has been heavily scoured. Gunitite was used to infill the scoured area behind the wingwall.

As part of a statewide bridge inventory by the Historic Bridge Inventory Committee, Bridge No. 10071 was determined National Register eligible under Criterion A as part of the general trend toward upgrading state roads and bridges (Interagency Review Committee 1998; Lanier and Linhart 1996). Bridge No. 10068 is scheduled for replacement in 2004. The current documentation was prepared to fulfill stipulation of the Memorandum of Agreement between the Maryland State Highway Administration and the Maryland Historical Trust to mitigate the effects of the project upon the historic property.

# Maryland Historical Trust

## Maryland Inventory of Historic Properties Form

Inventory No. F-4-104

### 1. Name of Property (indicate preferred name)

historic Bridge No. 10071  
other Wolfsville Road (MD-17) over Middle Creek

### 2. Location

street and number Wolfsville Road over Middle Creek at intersection with Bittle Road ☐ not for publication  
city, town Myersville ☒ vicinity  
county Frederick County

### 3. Owner of Property (give names and mailing addresses of all owners)

name Maryland State Highway Administration  
street and number 707 North Calvert Street telephone (410) 545-8540  
city, town Baltimore state MD zip code 21202

### 4. Location of Legal Description

courthouse, registry of deeds, etc. Frederick County Courthouse liber folio  
city, town Frederick tax map tax parcel tax ID number

### 5. Primary Location of Additional Data

- ☐ Contributing Resource in National Register District  
☐ Contributing Resource in Local Historic District  
☒ Determined Eligible for the National Register/Maryland Register  
☐ Determined Ineligible for the National Register/Maryland Register  
☐ Recorded by HABS/HAER  
☐ Historic Structure Report or Research Report at MHT  
☐ Other: \_\_\_\_\_

### 6. Classification

Category	Ownership	Current Function	Resource Count
<input type="checkbox"/> district	<input checked="" type="checkbox"/> public	<input type="checkbox"/> agriculture	Contributing
<input type="checkbox"/> building(s)	<input type="checkbox"/> private	<input type="checkbox"/> landscape	Noncontributing
<input checked="" type="checkbox"/> structure	<input type="checkbox"/> both	<input type="checkbox"/> commerce/trade	<input type="checkbox"/> buildings
<input type="checkbox"/> site		<input type="checkbox"/> defense	<input type="checkbox"/> sites
<input type="checkbox"/> object		<input type="checkbox"/> domestic	<input type="checkbox"/> structures
		<input type="checkbox"/> education	<input type="checkbox"/> objects
		<input checked="" type="checkbox"/> transportation	<input type="checkbox"/> Total
		<input type="checkbox"/> funerary	
		<input type="checkbox"/> government	
		<input type="checkbox"/> health care	
		<input type="checkbox"/> industry	
		<input type="checkbox"/> work in progress	
		<input type="checkbox"/> unknown	
		<input type="checkbox"/> vacant/not in use	
		<input type="checkbox"/> other:	
			Number of Contributing Resources previously listed in the Inventory
			1

## 7. Description

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### Condition

<input type="checkbox"/> excellent	<input type="checkbox"/> deteriorated
<input type="checkbox"/> good	<input type="checkbox"/> ruins
<input checked="" type="checkbox"/> fair	<input checked="" type="checkbox"/> altered

Prepare both a one paragraph summary and a comprehensive description of the resource and its various elements as it exists today.

Bridge No. 10071 carries Wolfsville Road (MD-17) over Middle Creek near Myersville, Maryland. Farms and low-density residential development characterize the rural area in the vicinity of the road. Wolfsville Road, the primary artery for the upper Middletown Valley, follows the course of the Middle Creek. The road traverses the stream valley along the easiest gradient from Meyersville north through the hamlets of Ellerton, Middle Point, and on to Wolfsville in northwestern Frederick County. Wolfsville was the northern terminus for state maintenance on the road until ca. 1950, when maintenance was extended northwest to the county line (Maryland State Roads Commission 1934-1961).

Bridge No. 10071 is a two-lane, two-span, concrete T-beam bridge that carries Wolfsville Road (MD-17) over Middle Creek. The bridge is located at the intersection of Wolfsville Road and Bittle Road. The State Roads Commission built the bridge in 1927 under contract #F 73. The bridge has one span measuring 34' and the other measuring 38'. The roadway width is 24' (Lanier and Linhart 1996). The structure features concrete abutments, flared wingwalls, and piers. The superstructure features five poured-in-place concrete beams and a concrete deck overlaid with asphalt. The structure features incised concrete parapets. One quarter of the upstream parapet has been replaced and the one upstream wingwall has been heavily scoured. Gunitite was used to infill the scoured area behind the wingwall.

Bridge No. 10071 is based on a 1924 standardized plan, which featured a roadway deck width of 24'. The 1920-1923 Report of the Maryland State Roads Commission stated that "new standard plans have been prepared for slab and girder spans and that type of the latter has been changed from the beam to the T-beam design, with a resulting saving in material" (Spero 1995:180). T-beam designs were first advocated by Tyrell in 1909 and promoted by the U.S. Bureau of Roads between 1910-1919. The design was adopted by several states by 1920.

Maryland's 1924 standard plan for T-beam bridges specified that the bridge was to be poured in place without joints between the girders and the slab (Spero 1995:180). The 1924 standard plans were specified in bridge construction until 1930, when the increasing size and weight of automobiles and trucks necessitated increasing the roadway width for all standard plan bridges to 27 feet. In 1933 the width was increased to 30 feet (Spero 1995:181). By the 1930s, concrete bridges were one of the most popular bridge types in Maryland (Legler and Highsmith 2002:22).

## 8. Significance

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Period	Areas of Significance	Check and justify below			
<input type="checkbox"/> 1600-1699	<input type="checkbox"/> agriculture	<input type="checkbox"/> economics	<input type="checkbox"/> health/medicine	<input type="checkbox"/> performing arts	
<input type="checkbox"/> 1700-1799	<input type="checkbox"/> archeology	<input type="checkbox"/> education	<input type="checkbox"/> industry	<input type="checkbox"/> philosophy	
<input type="checkbox"/> 1800-1899	<input type="checkbox"/> architecture	<input type="checkbox"/> engineering	<input type="checkbox"/> invention	<input type="checkbox"/> politics/government	
<input checked="" type="checkbox"/> 1900-1999	<input type="checkbox"/> art	<input type="checkbox"/> entertainment/	<input type="checkbox"/> landscape architecture	<input type="checkbox"/> religion	
<input type="checkbox"/> 2000-	<input type="checkbox"/> commerce	<input type="checkbox"/> recreation	<input type="checkbox"/> law	<input type="checkbox"/> science	
	<input type="checkbox"/> communications	<input type="checkbox"/> ethnic heritage	<input type="checkbox"/> literature	<input type="checkbox"/> social history	
	<input type="checkbox"/> community planning	<input type="checkbox"/> exploration/	<input type="checkbox"/> maritime history	<input checked="" type="checkbox"/> transportation	
	<input type="checkbox"/> conservation	<input type="checkbox"/> settlement	<input type="checkbox"/> military	<input type="checkbox"/> other:	

Specific dates	1927	Architect/Builder	Maryland State Roads Commission
Construction dates	1927		

Evaluation for:

☒ National Register      ☒ Maryland Register      ☐ not evaluated

Prepare a one-paragraph summary statement of significance addressing applicable criteria, followed by a narrative discussion of the history of the resource and its context. (For compliance projects, complete evaluation on a DOE Form – see manual.)

### Summary

Bridge No. 10071 carries MD 17 (Wolfsville Road) over Middle Creek (Figure 1). Wolfsville Road has existed since the first half of the nineteenth century and provided access for farmers in the Middletown Valley to the National Road. The National Road was a main transportation artery that provided access to Frederick and Baltimore (Figure 2).

Bridge No. 10071 is a concrete beam structure constructed in 1927 according to survey documentation prepared in 1996 (Lanier and Linhart 1996). Concrete beam bridges are one of the simplest bridge forms. Concrete beam bridges were first constructed in the middle of the nineteenth century. Their use became widespread in the early twentieth century when standardized designs were promoted by leading bridge engineers, the American Society of Civil Engineers, the American Concrete Institute, and the U.S. Bureau of Public Roads (Spero 1995:154, 160-161).

### Historic Context

#### Nineteenth Century Roads

At the turn of the nineteenth century, Marylanders depended upon the road infrastructure for access to markets and demanded better roads. Consequently, the beginning of a nineteenth century saw the building of the first all-weather roads, the turnpikes, and the National Road.

In 1808, Albert Gallatin, Secretary of the Treasury, made a through report of the internal improvements of the United States. His report as relating to turnpikes stated:

A great number of artificial roads have been completed in the eastern and middle States, at the expense varying from less than \$1,000 to \$14,000 a mile. The labor bestowed on the least expensive species consists of shortening the distance, diminishing the ascent of hills, removing rocks, levelling [sic], raising,

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and giving a proper shape to the bed of roads, draining them by ditches, and erecting bridges over the intervening streams. But the natural soil of the road is used, instead of covering it with a stratum of gravel or pounded stones (Wood 1919:14).

The National Road. The Federal government's first road construction project was the National Road, which extended from Cumberland, Maryland to the Ohio River at Wheeling, West Virginia. President Jefferson signed a \$30,000 appropriation for surveying and laying out the route in March 1806. The bill directed the President to appoint a three-person commission to lay out the road, which was to be four rods wide; was to have a "raised carriage-way in the middle of stone, earth, gravel or sand, with ditches along the side; while the inclinations were not to exceed five degrees" (Wood 1919:19).

Due to political deliberations, construction of the road did not begin until 1811. The first contract for ten miles was let in the spring at an average price of \$7,500 a mile. Further contracts were awarded as appropriations allowed, until the road was completed to Wheeling in December 1820 (Wood 1919:19).

Even well built roads, such as the National Road, needed maintenance. Locking wagon wheels cut deep ruts in the gravel dressing. In 1815, \$1,200 was used to repair the first sixteen miles from Cumberland. By 1826, the loose stones on the rock base were almost entirely washed away, or sunk under the foundation, leaving the large stones on top. In places, even the foundation was deteriorated. Vandalism also affected the roads. Bridge walls had been pried off, gravel from the road was stolen for personal use, fences, yards and gardens were built inside the right-of-way, and the course of the road was changed by adjoining property owners (State Roads Commission 1958:22-23).

Unwilling to maintain the National Road, the Federal government passed an act in 1832 transferring control of the road to the states through which it passed. Maryland and Pennsylvania accepted the road on the condition that the Federal government repair the road and build tollhouses and gates. In 1834, Congress accepted the terms and gave the job of rebuilding to the Army Corps of Engineers (State Roads Commission 1958:23).

Maryland's Governor James Thomas insisted that the new road be rebuilt using the macadam process, which, had been used for the first time in the United States a few years earlier in the construction of the Boonsboro-Hagerstown Turnpike (State Roads Commission 1958:23).

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In addition to macadamizing the road, the engineers widened it from twenty to thirty feet. The engineers removed all the stone from the roadbed. They drained and graded the new bed so it crowned three inches higher in the middle than at the sides. Ditches were dug so that the highest level water levels were eighteen inches below the lowest portion of the road surface. The stones, composed of limestone, flint or granite, were broken by hand so each passed through a three-inch ring and weighed less than four ounces. The stone then was spread by horse-rakes over the graded earth roadbed to a uniform depth of three inches. Road traffic compacted the layer. A second layer was spread and compacted before a third layer was added. This resulted in a surface composed of nine-inch small stones rolled hard by the weight of numerous Conestoga wagons.

The difference between the macadam method and the earlier construction was in the exclusive use of the small stones, which were so thoroughly compacted that they formed a solid base. By 1837, when the road was macadamized throughout its length, the National Road supported the densest traffic in the nation (State Roads Commission 1958:25).

Road Making Equipment. The nineteenth century saw the first developments in road making equipment, which included a few light horse-drawn implements. In 1831, a sulky scraper was patented. This was little more than drag to scrap the dirt from the ditch to the center of the road. A roller drawn by horses was built as early as 1843. Little improvement in equipment was made until 1848, when Eli Whitney Blake's stone crusher was introduced. Blake's machine used a strong, steam-powered, mechanical jaw to crush the stone. No successful grading machinery was introduced until many years later (Oliver 1956:176).

### Industrial/Urban Dominance 1870 - 1930.

Following the Civil War, Frederick County farmers, benefiting from high-quality farmland and good transportation routes, quickly regained their previous prominence, which had been interrupted during the war (Whitmore and Cannon 1981:62). Agricultural output increased; by 1870, more than one million bushels of corn and wheat were produced countywide (Scharf 1882). Interest in agricultural improvement also resumed, and the first County Fair was held in Frederick in 1878 (Whitmore and Cannon 1981:64).

The land outside the city limits of Frederick contained little industrial development as farming continued to dominate the community. Lake's *Atlas of Frederick County* indicated that in 1873 the fertile lands of the Middletown Valley were open farmland. Wheat and corn were significant crops. By the early twentieth century, more corn was grown than wheat, and tobacco production dropped (Wesler et al. 1981:144).

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Early in the twentieth century, a significant shift occurred in local agricultural practices. Dairy production came to dominate agriculture in Frederick County. At the end of the nineteenth century, Louis Pasteur discovered that partial sterilization or pasteurization neutralized harmful bacteria in dairy products. This scientific discovery, along with refrigeration and efficient transportation, made milk a safer drink, which raised demand for the product. The scale of dairy production historically was limited by food preservation and transportation technologies. Milk spoiled quickly. As a result, the sources of production were close to consumers. Increased population in nearby Baltimore and Washington, D.C. metropolitan areas was reflected in greater demand for milk. As a result, Frederick County became a major dairy producer in Maryland (Schmidt 1988).

Frederick County farmers sold their milk to dairies, such as the Baltimore and Washington White Cross Milk Company, which opened near Frederick's B&O Railroad freight depot in 1909. The operation could handle and store 10,000 gallons of milk daily. An earlier dairy, the Excelsior Sanitary Dairy, began in the late 1800s, was located on Frederick's East Seventh Street (Heidenrich 2003:130). Dairy's requirement for efficient transportation stimulated the push for better roads in Frederick County.

Farming continued to be lucrative until the end of World War I, when foreign markets closed. A surplus of agricultural products resulted and many farmers were forced out of business (Whitmore and Cannon 1981:100). Rising costs induced by increased mechanization and by new government health regulations also caused additional hardship for some farmers. However, Frederick County maintained its level of agricultural output. Between 1920 and 1930, Frederick County was the sole Maryland county to escape a drop in agricultural production (Wesler et al. 1981:144).

The county experienced the effects of stagnation at the beginning of the twentieth century. Increased mechanization replaced manual labor and reduced the number of jobs (Whitmore and Cannon 1981:63). In addition, the number of industries operating in the county dropped as conglomerates became more common (Wesler et al. 1981:144). As a result, many people moved to nearby cities in search of work. This problem increased after World War I, as those forced out of farming also sought work (Whitmore and Cannon 1981:100).

Despite the difficulties in agriculture and industry, new transportation routes were constructed and old ones were improved during this period. Rail transportation continued to be critical for the marketing of agricultural and industrial goods. The Monocacy Valley Railroad, first established between Mechanicstown (Thurmont) and Catocin Furnace in 1886, was extended south to Frederick by 1908 (Whitmore and Cannon 1981:122; Miller 1886:136-25). A

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branch of the Western Maryland Railroad reached Emmitsburg in 1875; and a spur of the Pennsylvania Railroad reached Frederick in 1872 (Miller 1886:1136-15; Harwood 1970:10).

New forms of transportation accelerated infrastructure development. Several trolley lines were established in Frederick during the 1890s; these became part of a system of electric inter-urbans that eventually connected Frederick to Hagerstown, and that spurred the development of resort areas like Braddock Heights west of Frederick (Harwood 1970).

### Twentieth Century Roads

In the 1880s, Frederick County contained ten macadam turnpikes and 1,200 miles of county roads. By 1910, automobiles had become common, and car owners demanded additional improvements in road conditions (Whitmore and Cannon 1981:101,119). In 1900, there were 14,483 miles of roads in Maryland of which 13,118 miles were dirt. Of the remaining 1,365 miles of improved roads in the state, 890 were "stone" roads, 225 were surfaced with gravel, and 250 miles were surfaced with oyster shells (State Roads Commission 1958:39).

Interest in the upkeep of roads was revitalized in the late 1800s by the introduction of the bicycle. At first, bike riding was confined to city streets. In 1887, the League of American Wheelmen with 30,000 Maryland members was formed, and became a propaganda agency for good roads (Oliver 1956:427-28). The Frederick Bicycle Club led local efforts. Through the efforts of the Dr. W.B. Clark, Maryland State Geologist, and the Maryland branch of The League of American Wheelmen, the Maryland legislature was persuaded to fund a study of Maryland's roads (State Roads Commission 1930:10). The Maryland Geological Survey's *Report of the Highways of Maryland* contained a comprehensive survey of the state's road conditions. The report recommended a ten-year program to build all-weather roads and to improve bridges within the state; thus replacing existing wooden bridges with iron or concrete bridges (Parsons Brinckerhoff Quade & Douglas, Inc. 1997:2-9). The first concrete bridges in Maryland were built in 1903 (Spero 1995:175-76).

The first important breakthrough for Maryland's good roads movement was the 1904 Shoemaker Act. The act provided \$200,000 annually in state financial aid to build modern macadam roads. Matching county monies dollar for dollar, this was the first time the state subsidized road construction. In 1908, the state formed the State Roads Commission to oversee an inter-county seat trunk-line road system to be improved and maintained with state funds. Maryland's road system was the first to place both construction and maintenance under state control (State Roads Commission 1958:45, 47).

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In 1904, the Maryland Legislature passed the first "Maryland State Aid for Highways" law. The results were so effective that, in 1908, the legislature enacted the State Road Act, which provided for the creation of a State Roads Commission and authorized the construction and maintenance of a system of state roads interconnecting the county seats within the state (State Roads Commission 1930:10-11). In 1912, the State Roads Commission reorganized into eight districts, each with its own resident engineer, and also issued its standardized plans for bridges (Spero 1995:178).

The Impact of Motorized Traffic. It wasn't until the advent of the automobile that new road surfacing technologies saw widespread use. Three technologies, concrete, asphalt, and tar roads, evolved during the nineteenth century, but came into common use only after 1900. The Romans first built concrete roads, but their system was forgotten until William Hobson took out an English patent for concrete roads in 1827. Modern concrete roads were not developed until after Portland cement became widely used in the latter half of the nineteenth century. The first concrete road in the United States was poured at Bellefontaine, Ohio in 1892 (Singer et al. 1965:448-49, 539).

The second technology was the asphalt road. Innovators had made three types of asphalt roads by 1900: compressed asphalt, mastic asphalt, and sand-asphalt. Compressed asphalt was made by rolling rock-asphalt disintegrated by heating and spread on a base. Mastic asphalt, a mixture of mastic, sand, and filler, was poured on a road and spread by a trowel. Sand-asphalt, a hot mixture of bitumen, sand, filler, and stones, was designed to leave no voids after compaction. It was spread and rolled after mixing at a temperature of 150-200 °C. The invention of the steamroller was a vital factor in the making sand-asphalt roads. In 1871, asphalt was applied in front of Newark City Hall for the first time in the United States. This trial stretch was built of compressed asphalt (Singer et al. 1965:539-41).

Tar roads utilized heavy tars and pitches. The first tar roads in the United States were built in Cleveland in 1873. In this case, a mixture of coal tar and gravel was applied to a macadam road. Although this trial was not very successful, tar roads came of age after the introduction of the automobile (Singer et al. 1965:541).

Until the introduction of automobiles, the hammering action of hoof and wagon wheels had been the main form of impact upon the roads. The automobile's rubber tires, however, exerted a suction on the road surface that deteriorated macadam road surface and created large clouds of dust. The problem of dust was the first problem tackled on the extensive network of older macadam roads. Therefore, tarring roads was the earliest choice for improving the roads.

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In 1904, only eighteen miles of rural roads in the United States were treated with hot bitumen, tar, or emulsified forms of these materials, all in Massachusetts and Ohio. By 1914, this mileage had increased to 10,500 miles. Although tar roads were fine for automobiles, their use began to decline with the introduction of trucks (MacDonald and Fairbank 1926:115).

The heavier weight of trucks necessitated the use of rigid roadbeds. Although the first concrete road was laid in 1893, there were less than five miles of rural highways in the country paved with concrete in 1909. This number grew exponentially in the following years when four miles were added in 1910, twenty miles in 1911, forty miles in 1912, 250 miles in 1913, and 1,500 miles in 1914. By 1924, 31,146 miles of rural roads were paved with concrete with 6,000 miles a year being added (MacDonald and Fairbank 1926: 115-16).

The increased use of motor trucks also led to the increased use of bricks and asphalt. In 1914, 1,600 miles were paved with brick with this increasing to 4,319 miles ten years later. In 1924, there were 9,700 miles of asphalt, which were nearly nonexistent tens years previously (MacDonald and Fairbank 1926:116).

Federal Aid Fuels Road Construction. The Federal Aid road act of 1916 stimulated the development of trunk line roads. One of the first acts of the Bureau of Public Roads requested that all states to submit a 5-year development plan. This act focused attention on the designation and improvement of a highway system. In 1926, the National Road was included in the new Federal highway system of national auto routes and was designated U.S. Route 40 (Heidenrich 2003:137).

America's entry into World War I, highlighted the strategic importance of a good highway system. When World War I broke out in 1914, Maryland's principal highways were paved and were capable of handling the traffic of the period. During the war, the roads were heavily used with damaging results. After the war, the state undertook a large-scale building campaign to rebuild the roads damaged by the defense-related traffic. Concurrently, an appraisal of Maryland's bridge system found that most bridges were too narrow and weak for the increasing traffic resulting from the automotive revolution. In addition, steamrollers increasingly were used for roadwork, but few existing bridges were unable to support the new equipment. As a result, the State Roads Commission developed a program of bridge replacement and reconstruction that was carried out through the 1920s and 1930s (Parsons Brinckerhoff Quade & Douglas, Inc. 1997:2-12).

The bridge building and reconstruction program was concurrent with an effort to enlarge the state road network to provide a state road within two miles of each resident (State Roads

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Commission 1930:20). The state road through the Middletown Valley was originally designated MD 33 in the 1920s, but was changed to MD-17 in the 1930s (Maryland State Roads Commission 1927; Pruett 2004).

During World War II, labor and material shortages led to the curtailment of road construction and maintenance. As a result, the State Roads Commission developed plans during the war for an extensive construction and repair program during the post war years (Parsons Brinckerhoff Quade & Douglas, Inc. 1997:2-15). By the 1950s, the section between Middletown and US 40 was dropped from state maintenance and the section north of US 40 was designated MD 153 (Maryland State Roads Commission 1958). Around 1985, the lost stretch was reclaimed and the MD 17 returned to original length (Maryland State Highway Administration 1985).

### Modern Period 1930 - present.

As a result of the absence of a significant industrial base in Frederick County, the depression years were followed by a longer than normal recovery period (Whitmore and Cannon 1981:100). Consequently, the county's population increased slowly during the 1930s (Wesler et al. 1981:144).

Frederick County entered a new era after World War II. The construction of one of the first segments of President Dwight Eisenhower's highway program influenced the county. During the early 1950s, the Baltimore to Frederick Road (Rte. 70) was completed, reducing transportation time between the two cities by thirty minutes (Jones 1974:11).

The proximity of Frederick to Washington, D.C. and to Baltimore has increased its appeal as a bedroom community, and major roadways have been constructed to accommodate growing commuter traffic. However, much of the county has retained an agricultural character. The town of Meyersville is a typical example of a town that has changed little since its original establishment.

### **Conclusion**

As part of a statewide bridge inventory by the Historic Bridge Inventory Committee, Bridge No. 10071 was determined National Register eligible under Criterion A as part of the general trend toward upgrading state roads and bridges (Interagency Review Committee 1998; Lanier and Linhart 1996).

Under Project No. FR377B21, Bridge No. 10071 is scheduled for replacement in 2004 as part of a program to replace structurally deficient and functionally obsolete bridges. The current

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documentation was prepared to fulfill stipulation of the Memorandum of Agreement between the Maryland State Highway Administration and the Maryland Historical Trust to mitigate the effects of the project upon the historic property.

Bridge No. 10071 is based on a 1924 standardized plan, which featured a roadway deck width of 24'. The State of Maryland utilized standardized concrete bridges since 1912. T-beam bridges were introduced by 1924 (Spero 1995:180). The 1924 standard plans were in use until 1930, when increased size, weight, and volume of automobiles and trucks necessitated increasing the roadway width for all standard plan bridges to 27 feet. In 1933, the width was increased to 30 feet (Spero 1995:181). By the 1930s, concrete bridges were one of the most popular bridge types in Maryland (Legler and Highsmith 2002:22). Bridge No. 10071, though partially rebuilt, exemplifies the general trend in adoption of concrete beams for bridges during the early twentieth century in Maryland overall and in Frederick County.

## 9. Major Bibliographical References

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See continuation sheet

## 10. Geographical Data

Acreage of surveyed property <1 acre  
Acreage of historical setting <1 acre  
Quadrangle name Myersville, Md

Quadrangle scale: 1:24,000

### Verbal boundary description and justification

The present MD 17 right-of-way including the bridge and approaches.

## 11. Form Prepared by

name/title	Brian Cleven, Industrial Archaeologist		
organization	R. Christopher Goodwin and Associates, Inc.	date	9/2004
street & number	241 East Fourth Street, Suite 100	telephone	(301) 694-0428
city or town	Frederick	state	Maryland

The Maryland Inventory of Historic Properties was officially created by an Act of the Maryland Legislature to be found in the Annotated Code of Maryland, Article 41, Section 181 KA, 1974 supplement.

The survey and inventory are being prepared for information and record purposes only and do not constitute any infringement of individual property rights.

return to: Maryland Historical Trust  
DHCD/DHCP  
100 Community Place  
Crownsville, MD 21032-2023  
410-514-7600

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Heidenrich, Chris

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Interagency Review Committee

1998 Summary Listing of Highway Bridges. Maryland State Highway Administration.

Jones, Carleton

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Lake, D. J.

1873 *Atlas of Frederick County, Maryland: From Actual Surveys.* C. O. Titus and Company, Philadelphia.

Lanier Gabriella M. and Stephen Linhart

1996 Maryland Inventory of Historic Properties Form, F-4-104.

Legler, Dixie and Carol M. Highsmith

2002 *Historic Bridges of Maryland.* Maryland Historical Trust Press, Crownsville, Maryland.

MacDonald, Thomas H. and H. B. Fairbank

1926 "The Development of Improved Highways." *Journal of the Western Society of Engineers.* Vol. 31, No. 4, April 1926, p. 113-121.

Maryland State Highway Administration

1966-2004 Map of Maryland.

Maryland State Roads Commission

Map of Maryland Showing State Road System and State Aid Roads.

1934-37 Map of Maryland Showing State Road System.

1958-61 Map of Maryland

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1886 A Brief History of Frederick County. In *General Directory of Frederick City and A Business Directory of Frederick County.* W. T. Delaplaine and Co., Frederick, Maryland.

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Pruett, Mike

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Scharf, J. Thomas

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**Maryland Historical Trust**  
**Maryland Inventory of**  
**Historic Properties Form**

Inventory No. F-4-104

Name  
Continuation Sheet

Number 9 Page 3

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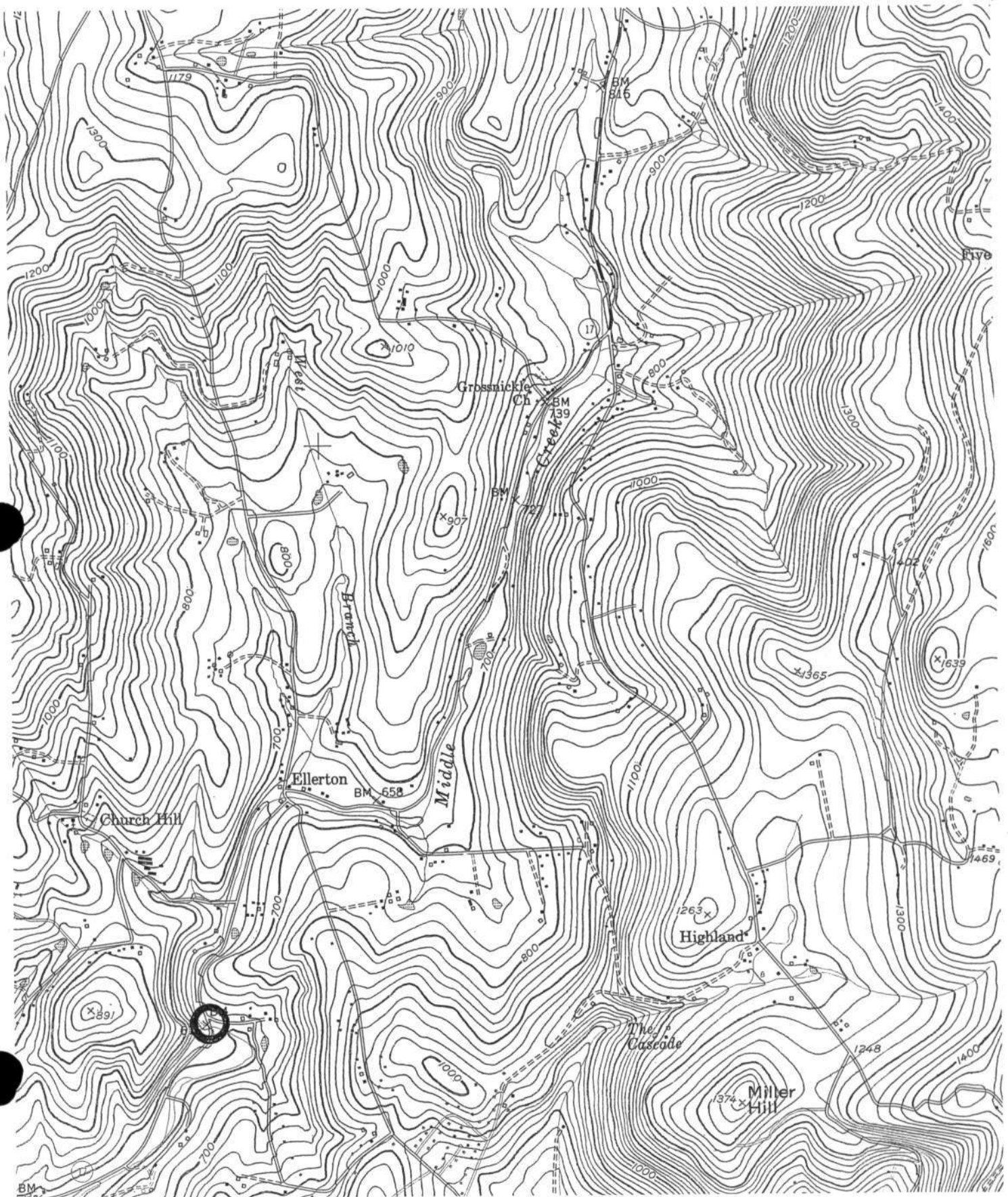
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Figure 2. Map of Frederick County, Md. Issac Bond C.E. Lithographed by E. Sachse & Co. c1858

F-4-104  
Bridge 10071  
Frederick Co, MD  
Meyersdale 7.5' USGS Quad  
*Myersville*





F-4-104  
SHA Bridge No. 10071  
Frederick County, MD  
B. Kermes, photographer  
8/2004  
Negatives @ MD SHPO

View of the eastern exterior balustrade of  
Bridge No. 10071



F-4-104

SHA Bridge No. 10071

Frederick County, MD

B. Kermes, photographer

8/2004

Negatives @ MD SHPO

View of the Approach of Bridge No. 10071  
looking north on MD 17.



F-4-104

SHA Bridge No. 100711

Fredenck County, MD

B. Kermes, photographer

8/2004

Negatives @ MD SHPO

View of the approach of Bridge No. 100711  
looking south on MD 17.

3 of 10



F-4-104

SHA Bridge No. 12011

Frederick County, MD

B. Kermes, photographer

8/2001

Negatives @ MD SHPO

View of ~~the~~ eastern interior balustrade  
looking north

4 of 10



F-4-104

SHA Bridge NO. 10071

Frederick County, MD

B. Kenners photographer

8/2004

Negatives @ MD SHPO

View of the interior-eastern balustrade  
looking south of MBIT.

5 of 10



F-4-104

SHA Bridge No. 10071

Frederick County, MD

B. Kermes, photographer

8/2004

Negatives @ MD SHPO

View of the western balustrade looking  
South on MD 17.



F-4-104

Sta Bridge No. 10071

Frederick County, MD

B. Kermes, photographer

8/2004

Negatives @ MD SHPO

View of the exterior eastern balustrade & concrete  
beams.

7 of 10



T-4-104

SHA Bridge No. 15071

Frederick County, MD

B. Kermes, photographer

8/2001

Negatives @ MD SHPO

View of the exterior western balustrade



F-4-104

SHA Bridge No. 100711

Frederick County, MD

B. Kermes, Photographer

8/2004

Negatives @ MD SHPO

View of substructure

9 of 10



A black and white photograph showing a concrete wall with a metal guardrail. The guardrail is bolted to the wall. A label with the number '10071' is attached to the wall. The background is filled with dense foliage.

10071

F-4-104

SHA Bridge No. 10071

Frederick County, MD

B. Kermes, photographer

8/2004

Negatives @ MD SHPO

Detail of end post.

Maryland Historical Trust

Maryland Inventory of Historic Properties number: F-4-104

Name: #10071 / MD 17 over Middle Creek

The bridge referenced herein was inventoried by the Maryland State Highway Administration as part of the Historic Bridge Inventory, and SHA provided the Trust with eligibility determinations in February 2001. The Trust accepted the Historic Bridge Inventory on April 3, 2001. The bridge received the following determination of eligibility.

MARYLAND HISTORICAL TRUST	
Eligibility Recommended <u>X</u>	Eligibility Not Recommended _____
Criteria: <u>  </u> A <u>  </u> B <u>  </u> C <u>  </u> D Considerations: <u>  </u> A <u>  </u> B <u>  </u> C <u>  </u> D <u>  </u> E <u>  </u> F <u>  </u> G <u>  </u> None	
Comments: _____	
_____	
_____	
Reviewer, OPS: <u>Anne E. Bruder</u>	Date: <u>3 April 2001</u>
Reviewer, NR Program: <u>Peter E. Kurtze</u>	Date: <u>3 April 2001</u>

MARYLAND INVENTORY OF HISTORIC PROPERTIES  
HISTORIC BRIDGE INVENTORY  
MARYLAND STATE HIGHWAY ADMINISTRATION  
MARYLAND HISTORICAL TRUST

MHT NO. F-4-104

NAME AND SHA NO.: 10071

LOCATION

Road Name and Number: MD 17 over Middle Creek

City/Town: Myersville \_ vicinity

County: Frederick

Ownership: X State \_ County \_ Municipal \_ Other

Bridge projects over: \_ Road \_ Railway X Water \_ Land

Is bridge located within designated district?: \_ yes X no  
\_ NR listed district \_ NR determined eligible district  
\_ locally designated \_ other  
Name of District \_

BRIDGE TYPE

- ☐ Timber Bridge  
    ☐ Beam Bridge    ☐ Truss-Covered    ☐ Trestle    ☐ Timber-and-Concrete
- ☐ Stone Arch Bridge
- ☐ Metal Truss Bridge
- ☐ Moveable Bridge  
    ☐ Swing    ☐ Bascule Single Leaf    ☐ Bascule Multiple Leaf  
    ☐ Vertical Lift    ☐ Retractable    ☐ Pontoon
- ☐ Metal Girder  
    ☐ Rolled Girder    ☐ Rolled Girder Concrete Encased  
    ☐ Plate Girder    ☐ Plate Girder Concrete Encased
- ☐ Metal Suspension
- ☐ Metal Arch
- ☐ Metal Cantilever
- ☒ Concrete  
    ☐ Concrete Arch    ☐ Concrete Slab    ☒ Concrete Beam    ☐ Rigid Frame  
    ☐ Other            Type Name \_

**MARYLAND INVENTORY OF HISTORIC PROPERTIES  
HISTORIC BRIDGE INVENTORY  
MARYLAND STATE HIGHWAY ADMINISTRATION  
MARYLAND HISTORICAL TRUST**

**MHT NO. F-4-104**

**DESCRIPTION**

**Describe the Setting:**

Bridge #10071 carries MD 17 over Middle Creek, near the border of Maryland's Appalachian and Piedmont physiographic regions. Route 17 runs in a north-south direction. The portion of Middle Creek beneath the bridge runs east and west. The bridge is located approximately 1 mile northeast of the town of Myersville.

**Describe the Superstructure and Substructure:  
(Discuss points identified in Context Addendum, Section C)**

Bridge #10071 carries two lanes of traffic over Middle Creek. The structure is a double-span concrete beam bridge, with one span measuring 34'-0" and the other span measuring 38'-0". The clear roadway width is 24'-0". The bridge is constructed with concrete girders and deck, a plain concrete pier, plain concrete wingwalls and abutments, and closed paneled concrete parapets. The bridge number is stenciled on one of the parapet walls. Both approaches to the bridge are flanked with modern metal guardrails which are attached to the ends of the parapet walls.

Inspection reports note overall deterioration of the bridge's concrete elements.

A survey of historic concrete beam bridges undertaken by the Maryland State Highway Administration in the Fall of 1995 identified 113 bridges of that type located throughout the state. Nearly one-quarter (26) of that total were double-span bridges; 37 bridges (33%) were multiple span.

**Discuss major alterations:**

According to available documentary evidence, the bridge has not undergone any major alterations since its construction.

**HISTORY**

**When Built:** 1927

**Why Built:** Statewide road improvement programs and local transportation needs

**Who Built:** State Roads Commission, contract #F 73

**Who Designed:** Unknown; design based on 1924 SRC standards

**Why Altered:** Guardrails were added to increase safety.

**Was this bridge built as part of an organized bridge building campaign?:** No

MARYLAND INVENTORY OF HISTORIC PROPERTIES  
HISTORIC BRIDGE INVENTORY  
MARYLAND STATE HIGHWAY ADMINISTRATION  
MARYLAND HISTORICAL TRUST

MHT NO. F-4-104

SURVEYOR ANALYSIS

**This bridge may have NR significance for association with:**

X A (Events)       B (Person)       C (Engineering/Architectural Character)

**Was this bridge constructed in response to significant events in Maryland or local history?**

Road improvements in Frederick County were fueled by several events occurring during the early twentieth century. First, the Good Roads Movement, which began in the last decade of the nineteenth century, aimed to improve primary roads throughout the state as well as multiple connecting roads between counties. As the movement progressed, numerous existing roads were widened, straightened, or graded, and many new bridges were built to carry the rebuilt roads. Second, rapidly increasing automobile, truck, and bus traffic also fueled the replacement of existing narrow and weak bridges with wider and stronger concrete structures, many of which were built according to standardized specifications and plans developed by the State Roads Commission (SRC). Third, the State Roads Commission established district engineering offices during the 1910s to aid in intrastate road development, and established a separate bridge department in 1920. This fostered construction of many concrete bridges throughout the state. In the 1920s, the SRC emphasized improving the safety and comfort of primary routes while developing secondary networks and feeder roads. By the 1930s, bridges that were originally deemed adequate had become unacceptable for carrying modern traffic loads and many new structures were built as a result.

**When the bridge was built, and/or given a major alteration, did it have a significant impact on the growth and development of the area?**

Bridge #10071 participated in the general trend toward upgrading state roads and bridges and improving intrastate access.

**Is the bridge located in an area which may be eligible for historic designation, and would the bridge add or detract from the historic and visual character of the possible district?**

No, the bridge is not located in an area that is eligible for historic designation.

**Is the bridge a significant example of its type?**

No, this bridge is not a significant example of its type. It was one of many bridges built according to standard plans for concrete beam bridges.

MARYLAND INVENTORY OF HISTORIC PROPERTIES  
HISTORIC BRIDGE INVENTORY  
MARYLAND STATE HIGHWAY ADMINISTRATION  
MARYLAND HISTORICAL TRUST

MHT NO. F-4104

**Does the bridge retain integrity of the important elements described in the Context Addendum?**

Yes this bridge retains integrity of its character-defining elements. The character-defining elements for the superstructures of concrete beam bridges are the slab, the longitudinal beams, and the parapet or railing when integral. For the substructure, the character-defining elements are the abutments, piers, and wing walls. A search of bridge inspection reports, State Roads Commission reports and as-built drawings on file at the State Highway Administration has not indicated that any major alterations to this structure have occurred.

**Is the bridge a significant example of the work of the manufacturer, designer, and/or engineer, and why?**

No, this structure is not a significant example of the work of the State Roads Commission. It is one of many concrete beam bridges built according to standard specifications.

**Should this bridge be given further study before significance analysis is made, and why?**

No, this structure should not be given further study.

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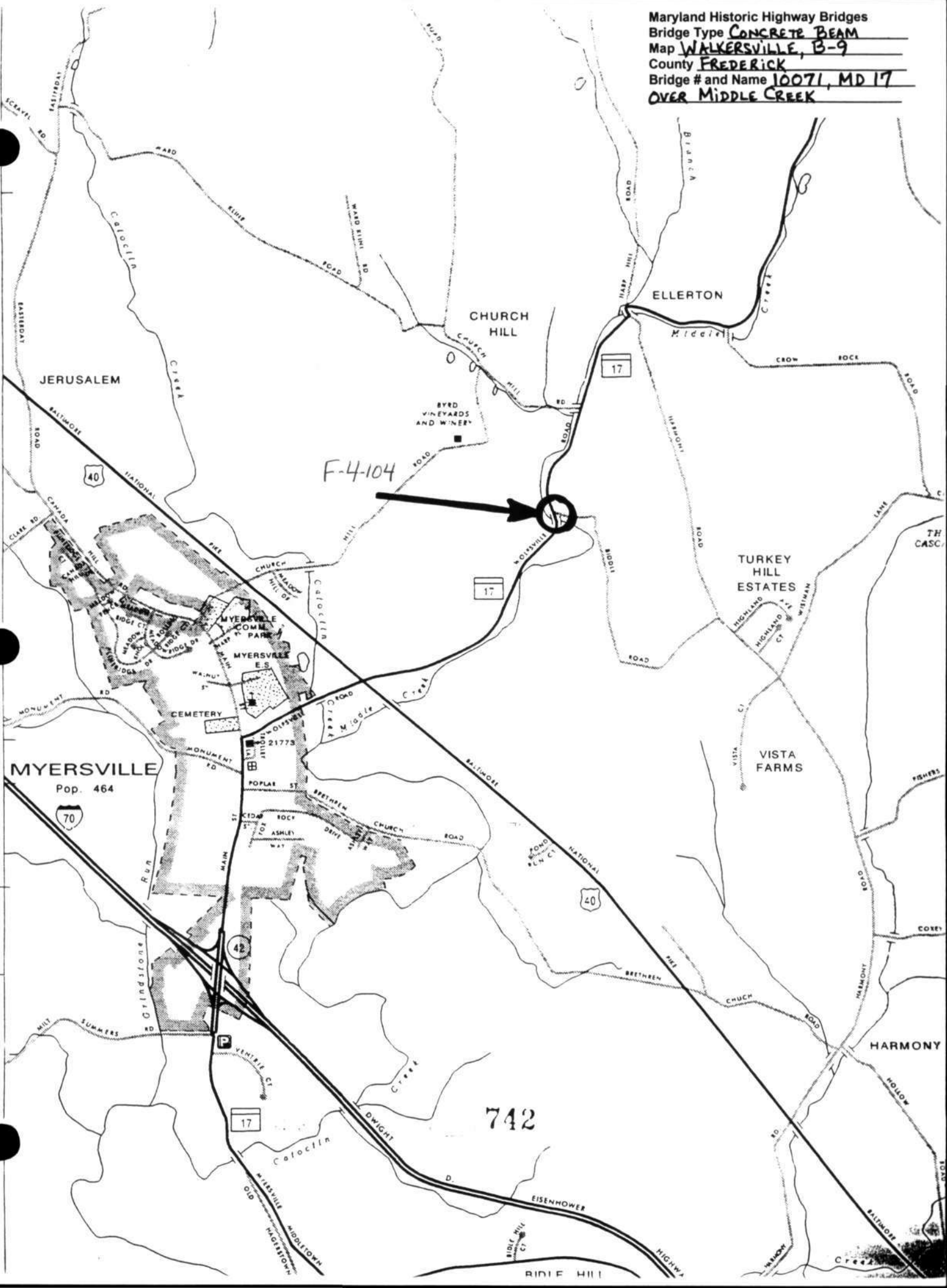
**SURVEYOR INFORMATION**

Name:                      Gabrielle M. Lanier/Stephen Linhart  
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Address:                  5001 Louise Dr., Suite 201  
                                 Mechanicsburg, PA 17055

Date: 13 May 1996  
Telephone: (717) 691-1340

Maryland Historic Highway Bridges  
Bridge Type CONCRETE BEAM  
Map WALKERSVILLE, B-9  
County FREDERICK  
Bridge # and Name 10071, MD 17  
OVER MIDDLE CREEK

F-4104





Inventory # F-4-104

Name 10071-MD 17 OVER MIDDLE CREEK

County/State FREDERICK COUNTY/MD

Name of Photographer FRANK JULIANO

Date 2/95

Location of Negative SHA

Description APPROACH SOUTH

Number 1 of 36 4



Inventory # F-4-104

Name 10071-MD 17 OVER MIDDLE CREEK

County/State FREDERICK COUNTY MD

Name of Photographer FRANK JULIANO

Date 2/95

Location of Negative SHA

Description ELEVATION LOOKING EAST

2  
Number 4 of 36 4



Inventory # F 4-104

Name 10071-MD 17 OVER MIDDLE CREEK

County/State FREDERICK COUNTY/MD

Name of Photographer FRANK JULIANO

Date 2/95

Location of Negative SHA

Description ELEVATION LOOKING WEST

Number 3 of 364



Inventory # F-4-104

Name 0071-MD17 OVER MIDDLE CREEK

County/State FREDERICK COUNTY / MD

Name of Photographer FRANK JULIANO

Date 2/95

Location of Negative SHA

Description APPROACH NORTH

Number 42 of 364